

THE COLLECTION OF CHEUMATOPSYCHE ANALIS IN HAWAII  
(Hydropsychidae: Trichoptera)

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To date only one trichopteran has been recorded from the Hawaiian Islands, *Oxyethira maya* Denning. It was collected by E. C. Zimmerman on October 10, 1940 at Moanalua Gardens, Honolulu, Oahu. The species was originally described from Georgia. Bickle (1962) has recorded the species from several localities in Florida.

Recently the junior author examined the combined catches of about thirty New Jersey type light traps operated at scattered locations on Oahu by the State Department of Public Health. In these collections specimens of a caddisfly were found. This species, *Cheumatopsyche analis* (Banks), represents the second caddisfly known to occur in the Hawaiian Islands. One male and three females were taken on Oahu, October 15, 1965, and two females in November, 1965. Since December, 1965 about one hundred fifty specimens have been collected in January, February, March, April and May 1966 (to date of this manuscript).

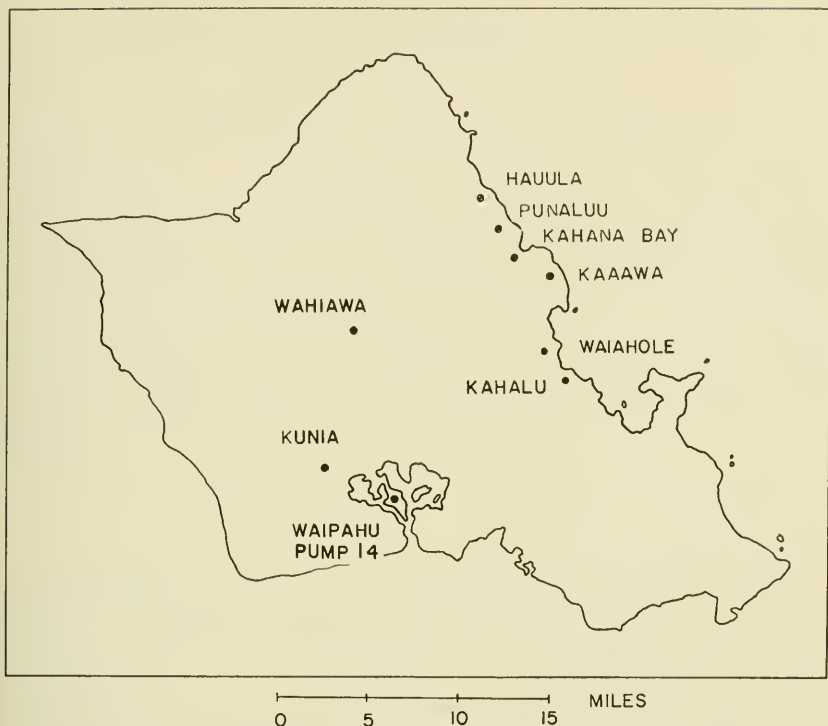
The map of Oahu shows the location of nine light traps from which *C. analis* have been collected. The light traps at Kaaawa, Kahana Bay, Punaluu, Hauula, Kahalu and Waiahole are in the moist windward portion of the island; the light traps at Kunia and Waipahu are located in irrigated sugar cane fields in the drier area of the island; the light trap at Wahiawa is on the drier central plateau.

The range of *C. analis* is large, extending from the Atlantic coast to British Columbia and eastern Washington and Oregon. The senior author has identified specimens from: Nova Scotia, Newfoundland, Maine, New Hampshire, New York, Pennsylvania, Ohio, Massachusetts, Nebraska, Manitoba, North Dakota, Minnesota, Colorado, Idaho, eastern Oregon and eastern Washington.

During the past several years large numbers of *Oxyethira maya* have been collected in light traps at various locations on Oahu by the junior author.

On May 30, 1966, a collection of *Cheumatopsyche* larvae was found under rocks in the swift water of Opaepala Stream, Oahu. The larvae of *Cheumatopsyche analis* will subsequently be described. Accordingly, *C. analis* is now established on Oahu. On the basis of the large numbers of *Oxyethira maya* collected and the widely scattered collec-

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Location of light traps where adults of *C. analis* were taken during February-May, 1966 on the Island of Oahu.

tion locations, it may be assumed that this species is also established on Oahu.

It is a matter of conjecture how either of these species reached Oahu. Their survival from their point of origin seems unlikely other than as gravid females. If the postulation of Zimmerman (1942) is correct that entrance to Hawaii was gained "by accompanying imported aquatic plants," survival in the egg stage would be easier than as larvae. The immature *Cheumatopsyche* known to the writers require cool, fairly well aerated water.

#### REFERENCES

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